Information Technology Department Business Plan

Fiscal Years: 2018 and 2019
(10/1/2017 through 9/30/2019)

Approved by:

Angel Petisco, Chief Information Officer/Department Director

Ed Marquez, Deputy Mayor

Plan Date: 3/2/2018
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPARTMENT OVERVIEW</td>
<td>2</td>
</tr>
<tr>
<td>Departmental Mission</td>
<td></td>
</tr>
<tr>
<td>Table of Organization</td>
<td></td>
</tr>
<tr>
<td>Strategic Alignment Summary</td>
<td></td>
</tr>
<tr>
<td>Our Customer</td>
<td></td>
</tr>
<tr>
<td>KEY ISSUES</td>
<td>5</td>
</tr>
<tr>
<td>PRIORITY INITIATIVES</td>
<td>6</td>
</tr>
<tr>
<td>FUTURE OUTLOOK</td>
<td>16</td>
</tr>
</tbody>
</table>
DEPARTMENT OVERVIEW

Department Mission

“At ITD, we provide technology, information, and business solutions that exceed customer’s expectations and enhance the quality of life in our community”

The Information Technology Department (ITD) is the central technology provider for Miami-Dade County. ITD provides information technology services that enable and support operations of County departments, external governmental agencies, residents and the public at large, including making information and services easily accessible to citizens and visitors of Miami-Dade County. ITD plans, develops, manages, and maintains a reliable and secure information technology infrastructure, including network, radio and hardware/software platforms, to support countywide and departmental specific applications and services. ITD partners with other County departments, management, and key technology providers to implement and maintain technology solutions that enable efficient operations, delivery of County services, and coordinates with the Information Technology Leadership Council (ITLC) on policy and practices. The Department establishes business processes to ensure that IT standards, methodologies, security, and project management are implemented in accordance with best practices. The department is able to achieve this level of support by leveraging technology which provides innovation and continuity of operations. Key stakeholders include all County departments, Miami-Dade County municipal governments, local, state, and federal agencies, elected officials, Miami-Dade County residents, businesses, visitors, and the public that visits the County’s website worldwide.
# Table of Organization

**OFFICE OF THE DIRECTOR**
- Oversees the provision of IT resources and services and performs Chief Information Officer (CIO) functions

<table>
<thead>
<tr>
<th>FY 17-18</th>
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**OPERATIONAL SUPPORT**
- Provides asset management, financial, budgetary, human resources and administrative support to IT operations

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**DATA CENTER SERVICES**
- Provides 24 X 7 operation and support for the hardware and system software that run the County’s mainframe and distributed systems environments; provides enterprise storage and backup services, desktop and server virtualization and mainframe printing services

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<th>FY 17-18</th>
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**ENTERPRISE SOLUTIONS**
- Delivers enterprise services for Geographic Information System (GIS), Enterprise Asset Management System (EAMS), and Electronic Content Management (ECM)

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**ENTERPRISE APPLICATIONS (Public Safety/Justice Systems)**
- Provides multi-platform automated application systems support for public safety application systems including Clerk of Court, Police, Corrections and Criminal Justice.

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**ENTERPRISE ARCHITECTURE**
- Delivers enterprise middleware, architecture, and database services, and provides support for 311/911

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**FIELD SERVICES**
- Delivers engineering, enterprise maintenance, installations, and support for telephone systems, computer peripherals, wireless devices, and wide and local area network support

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**ENTERPRISE RESOURCE PLANNING**
- Delivers enterprise program services for Enterprise Resource Planning (ERP) and core legacy systems including human resource and financial systems

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**ENTERPRISE SECURITY**
- Develops and implements data security policies, manages enterprise security risk, and manages the County’s data security infrastructure, remote access, directory services, and mobile messaging

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**RADIO COMMUNICATION SERVICES**
- Provides local and regional public safety first responders and County departments with efficient, reliable, and secure radio communications services and solutions

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**COUNTY SERVICES**
- Provides multi-platform Countywide and departmental automated systems for administrative, legislative, environmental, public works, waste management, library, public housing, community development, port and transit applications

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The FY 2018-19 total number of full-time equivalent is 875 FTEs.
Strategic Alignment Summary

ITD directly or indirectly supports virtually every objective in the County’s Strategic Plan. The objectives which ITD supports most directly include:

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<thead>
<tr>
<th>GG1-1</th>
<th>Provide easy access to information and services</th>
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<tr>
<td>GG1-2</td>
<td>Develop a customer-oriented organization</td>
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<tr>
<td>GG3-1</td>
<td>Ensure available and reliable systems</td>
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<td>GG3-2</td>
<td>Effectively deploy technology solutions</td>
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<tr>
<td>GG3-3</td>
<td>Improve information security</td>
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<td>GG4-2</td>
<td>Effectively allocate and utilize resources to meet current and future operating and capital needs</td>
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<tr>
<td>GG5-3</td>
<td>Utilize assets efficiently</td>
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<tr>
<td>GG2-2</td>
<td>Develop and retain excellent employees and leaders</td>
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<td>GG2-4</td>
<td>Provide customer-friendly human resources services</td>
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Our Customer

ITD’s principal internal customers are the County’s departments and agencies. External customers include local and municipal entities, many of whom are public safety agencies, the State of Florida, the federal government, and the citizen population of Miami-Dade County. Our citizens have increasingly made use of technological avenues to obtain information and to perform business using the County’s readily available technology and information. Miami-Dade County residents expect reliable, secure websites for conducting business with the County. Departments expect a readily available and secure computing and networking infrastructure to support their respective business. In addition, they seek cost-effective and timely solutions to address their business needs and communities of interest. Additionally, the use of self-service solutions through all channels of access is a priority for all customers.

The County’s departments manage a myriad of unique businesses resulting in different requirements and needs. ITD continually evaluates the industry best practices for the technologies available and implements enterprise systems to meet the needs of customers. As systems and business processes evolve, ITD continually evaluates opportunities for modernizing the portfolio and implementing best practices.

A comprehensive map of all IT Services, their performance metrics and costs are outlined in all-inclusive Memorandums of Understanding (MOU) and Service Level Agreements (SLA) with County departments. The provisioning of services is assessed by the Business Relationship Management (BRM) team to ensure adherence to agreed-upon service levels and service effectiveness allowing the
opportunity to gauge satisfaction with ITD services and make adjustments to better serve customer needs, and ensure the integration of business strategies, and priorities into the IT strategy. In continuing to improve services, ITD will maintain a service catalog which clearly describes ITD’s various lines of business and rates.

Customer trends include increased demand for self-service functionality, data analytics to enhance decision making, mobility, transparency, and enhance channels to simplify, integrate and streamline service delivery. ITD will continue to implement information technology best practices into a consolidated environment, utilize the maximum efficiency of systems, staff and resources available to Miami-Dade County; consolidation of IT infrastructures and redundant functionalities county-wide is well underway. ITD continues to work with customers to identify opportunities to realize additional efficiencies and savings through technology.

ITD adheres to federal, state and local government regulations, including the federal Communications Commission (FCC), Health Insurance Accountability and Portability Act (HIPAA), Florida Department of Law Enforcement’s (FDLE), U.S. OMB Circular A-87, National Incident Management System (NIMS) for Emergency Response, Florida statutes for the Public Records and Government in Sunshine laws, Payment Card Industry (PCI), NEIM (National Information Exchange Model) and with Criminal Justice Information System (CJIS) requirements.

**KEY ISSUES**

Representation from all divisions contributed to identifying key issues facing the department by performing a SWOT analysis. ITD has made significant progress and continues to work on its strengths, weaknesses, opportunities and threats.

**Strengths**

- Enterprise infrastructure technology investments
- Business process knowledge
- Employee commitment and longevity
- Established customer relationships
- Enhanced cost effectiveness and efficiencies as a result of IT consolidation
- Established customer Memorandums of Understanding (MOU)
- Leveraging cloud service solutions for seamless deployment of IT resources
- Experienced and talented employees

**Weaknesses**

- Advanced customer service skills – addressed with on-going training
- Communication of strategic plan across the organization (sharing value proposition)
- Limited documentation of business processes to assess enhancement opportunities
- Advancement of metrics and measures to track operational goals, efficiencies, and success factors due to fast changing technology standards
Development of Succession planning strategy due to recruitment procedural rigidness
Complex processes and limitation of standards to facilitate meeting the customer’s needs
Limited marketing of departmental services and products
Limited implementation of an Agile framework
Limited implementation of contemporary IT classifications/skills
Loss of institutional knowledge through attrition and retirement

Opportunities

- Customer’s business process re-engineering via implementation of best business practices
- Customer’s adoption of a centralized IT Service Desk to include business area knowledge base
- Coordinated investment in enterprise solutions
- Increased adoption of ecommerce, internet, and mobile services by citizens, visitors, and businesses
- Increased use of self-service technologies
- Streamline and strengthen vendor management and partnerships
- Providing technology solutions to municipalities and other government agencies

Threats

- Future economic and fiscal environment
- Loss of customer’s institutional business process knowledge due to attrition and retirement
- Rapidly changing cybersecurity threat landscape
- Limited governance to prioritize competing business initiatives
- Rapidly changing technology advancements
- Change in political and regulatory environments

PRIORITY INITIATIVES

Bi-Modal organization

The continued adaptation of a Bi-Modal IT organization model which postulates that the IT enterprise organization structure would support two modes of operation – one to preserve the foundation and structure that maintain existing core disciplines focused on stability and efficiency, the other mode will respond to the new innovating, emerging and changing technology demands focused on time-to-market, rapid application evolution, and, tight alignment with business units. ITD will continue the evolution of the IT enterprise organization structure to exemplify the bi-model concept and methodologies.
IT Consolidation

During FY2017-18 and FY2018-19, ITD will continue to execute the Mayor’s initiative to implement information technology best practices into a consolidated environment to utilize the maximum efficiency of systems, staff and resources available to Miami-Dade County. From launch of consolidated efforts, IT functions in the following County departments have been consolidated under ITD: Regulatory and Economic Resources (RER), Internal Services (ISD), Animal Services (ASD), Public Works and Waste Management (PWWM), Transit (MTD), Police (MDPD), Corrections and Rehabilitation (MDCR), Seaport (SP), Parks and Recreation and Open Spaces (PROS), Library (LB), Public Housing and Community Development (PHCD) and Communications (GI), Community Action and Human Services (CASHD), Finance (FN), Water and Sewer (WS). Upcoming departments that will be consolidated are Medical Examiner (ME), Fire Rescue (FR), Aviation (AV), and Elections (EL).

As the IT consolidation initiative progresses, County departments will continue to be analyzed and consolidation recommendations implemented to obtain not only additional cost savings and cost avoidance to the County, but also achieving simplification of processes and standardization of products and IT methodologies. This ongoing effort will produce operational efficiencies, expanded capabilities, improved continuity of operations, and better collaboration and information sharing.

In addition, information technology contract consolidation is ongoing, allowing the County to leverage its procurement volume to achieve more favorable pricing terms and lower operational costs. Under this state, ITD manages the contracts countywide for the purchase of IT products and services. Departments with an existing allocation under a current contract term will continue to issue purchase orders against their existing allocations until they exhaust their allotment for that term.

Enterprise Resource Planning (ERP)

ERP systems include a suite of fully integrated financial, procurement and human capital management, and business analytic applications that will replace disparate legacy systems currently used within the County. The ERP solution will deliver substantial efficiencies, increased accountability and responsiveness for the County. A fully implemented ERP system will improve transparency of business, enable streamlined B2B (Business to Business) transactions for Citizens and Vendors, enhance financial planning, and improve management approval processes and reporting. ERP solutions manage end to end business processes including “procurement to payment”, and “hire to retire”, employment life cycle and “Bill to Cash”; allowing for financial transactions traceability and reporting.

The County selected the Oracle PeopleSoft, Hyperion, and Business Intelligence products as its ERP platform and implemented the ERP financial and procurement modules in the Water and Sewer and Aviation Departments. The goal for County-wide ERP implementation is to improve organizational effectiveness through process efficiency and self-service, and to facilitate improved talent acquisition and staff retention. A governance structure will be established to support the ERP and ensure that the software remains current as the ERP software applications evolve. The phased implementation is planned over a four year timeframe and is expected to begin in FY2017-18.

Enterprise Portfolio Management Office

ITD has effectuated positive change with the provision and centralization of the County’s technology service, by establishing the Enterprise Portfolio Management Office (EPMO), focusing on
understanding the needs of the County's IT initiatives, prioritizing and ensuring strategic IT projects are aligned with current technology and project standards, and endorsing the appropriate monitoring of resources for the quality delivery of strategic IT projects. The EPMO will continue to focus on the provision of program management in the areas of ERP, Code Enforcement and Permitting, and Criminal Justice System modernizations, as well as providing strategic enterprise project management services.

**Business Relationship Management (BRM)**

Continue the improvement of the relationship between technology and business stakeholders. Overall, the BRM team will collaborate with customers to shape technology initiatives, make sure that IT services meet customer expectations, discuss key IT risks/vulnerabilities or issues with operational areas to achieve negotiated resolutions, promote standards, provide guidance to business units on IT matters, and enable and advocate for IT changes. Moreover, BRMs will add value to customers with the review of their technology portfolio, track performance and assess financial standing while developing Memorandum of Understanding (MOU) on an annual basis along with detailed key accomplishments, major projects planned for the following year, and cost comparison with forecasts. Service level agreements (SLAs) within these MOUs are continuously reviewed and renewed with customers.

**IT Service Center**

The IT Service Center is part of a comprehensive plan to deliver quality IT services which will enhance, promote and strengthen customer IT Support Program and relationships. As part of the ongoing IT consolidation initiative, ITD resumed direct responsibility of the IT Service Desk, the first phase in a planned expansion for an enterprise IT service center with greater emphasis for customer reliance on self-service with the launch of a new IT Service Management tool. The initiative, sanctioned by the ITLC, is for an enterprise service center for all IT services, with a focus in providing quality services while building customer relationships. Working together with the BRM team, ITD continues to provide customer communications and service opportunities to improve the customer experience.

During FY 2017-18, the new Remedy on demand system was implemented improving the service request intake process with the provisioning of MyIT, a self-service portal and catalog for customers. The intake of IT services was consolidated into one system, with re-engineered processes for increased responsiveness and improved fulfillment time. Additionally, customers have access to service delivery performance reporting dashboards to monitor IT services.

**IT Service Catalog**

The IT services catalog, and IT portal with built-in, self-evaluating mechanisms including gathering customer feedback, defines the services ITD provides in terminology that is comprehensible and meaningful to County departments as part of their businesses. As a web based, self-service portal, the catalog provides the means by which customers can understand the specifics of any IT service, make a request to receive that service, inquire on the progress of the processes needed to deliver the
service, and provide feedback on the experience. The expanded service catalog has been redesigned for greater ease in locating desired IT services along with their associated workflows for fulfillment. The catalog is integrated with back office technology solutions to achieve greater efficiencies through automation and ensure that all the information about a request for service is most current. As County departments and other customers refine their business operations and make IT requests, ITD can identify trends that can impact operations and address these in the most efficient manner. The services catalog continues to be developed through the Remedy system and augmented as the IT consolidation process continues and departments provide ITD with specific service needs.

**Enterprise Content Management (ECM)**

Expansion of the Enterprise Content Management (ECM) initiative that enables the automated capture, management, redaction, retrieval and retention of documents under a unified, enterprise platform. Customers in the industries of public safety, legislative, human resource, financial, election, and environmental use the technology to categorize document types and develop new systems that will facilitate seamless access to content. Capabilities exists to enable the searching of public documents over the Internet as well as the ability to integrate ECM with other enterprise applications such as asset management, financials and geographical. For the upcoming year, this technology will continue to enhance the public facing presence, implement solutions in the mobile platform and establish standards for additional content formats such as CAD drawings.

**Enterprise Asset Management (EAM)**

The Enterprise Asset Management (EAM) houses over 1 million assets, providing access to approximately 6,900 users on a shared infrastructure. It promotes collaboration and seeks to improve efficiencies and set standards in areas of asset and inventory management, work management, preventive maintenance, materials management, work request and call center management. Examples of services initiated this year that will continue to be enhanced in the upcoming fiscal period include automation of inspections on mobile devices for field personnel, production rollout of the Metrobus mechanics repair work orders, continued expansion of the GIS/EAMS configuration for location analysis, configuration of condition assessments for asset reliability, use of the Open Cad module for providing graphical representation of building plans related to asset location, and use of the Epak module for creating online training materials and technical documentation.

**Business Intelligence Analytics**

Promotes and provides delivery enablement through a consistent set of Business Intelligence (BI) skills, standards and proven practices. ACE enables repeatable successful BI and Analytics deployments through the development and focus of people, technology and process in ways that make sense to an organization as a whole, rather than a single project. Following established standards and best practices, the core BI ACE includes all technologies for the development of business intelligence and analytics. ACE has marketed the use of analytics and provided enterprise training to continue expanding this technology. As a result of current implementations, such as dashboards for employee data, public safety and sustainability, other new enterprise implementations were developed, such as the Invoice Workflow Accounts (IWA) Payable, along with planned web-
based reporting capabilities for Financial Disclosure, Cone of Silence and Permitting statistics. Enterprise business analytics will continue to be upgraded to the most current versions and available to all county departments on the web and via mobile devices, and a geographical location analytics tool is available to enhance dashboards with mapping information.

As more IT staff is consolidated into ITD, the objective is to establish a data-driven culture that encompasses business analytics into all new and existing applications to enrich decision making. The implementation of additional critical business functions are required to provide a higher level of program support. These include data warehouse modeling, and the creation of enterprise data warehouses. Having these critical functions facilitates integration with major countywide core technologies to include Enterprise Resource Planning (ERP), Enterprise Content Management (ECM), Enterprise Asset Management (EAM) and Geographical Information Systems (GIS).

**Geographic Information System (GIS)**

The County’s GIS services include but are not limited to the provisioning of the County’s central repository of geographic information, maintenance of base layers, such as streets, addresses, parcels, imagery, 3D building, administration of GIS infrastructure, Cloud services provisioning and administration, routing and field work solutions, mobile development, system integration, project management, vendor management, and GIS portal administration. The GIS CoE maintains a base street foundation presently containing over thousands of layers of information, addresses, sub-addresses, and street segments. The competency center researches and evaluates new GIS technologies and environments including Cloud development strategies, 3D imagery usage and alignment in support of vertical zoning, land use, resiliency and NG 911, supports the GIS user's group and promotes countywide Location Intelligence and Spatial Analysis education via presentations, events and its [GIS portal](https://miamidade.gov) presence on miamidade.gov. The GIS CoE continues to expand the geographic based Open Data site delivering readily accessible live spatial information and map services that provide location centric government data via web self-service.

The COE continues to promote the real-time collection of data and the immediate sharing of that data through GIS web based, mobile, and cloud solutions. Plans are to continue to develop, interface, and integrate GIS services through the County’s technical portfolio enabling the use of spatial analysis. Continue to enhance operations for field crews to capture and update both tabular and spatial information via smartphones and tablets using the built-in GPS capabilities of the device, or by simply tapping on a map. Integration with Waze-generated incident and slow-down information will enhance field collection and routing applications utilized by the County’s mobile workforce. GIS is a technology used to engage and communicate with residents for reporting of problems, locating services, and supporting initiatives. Through story maps and web scenes and the development of a 3D multidimensional base layer, GIS will facilitate outreach to residents and further transparency in such areas as resiliency and urban and transportation planning.
Miami-Dade “On-Premise” mobile application

Development, deployment and continue support of the “On-Premise” mobile application. The application provides County residents with one stop County information regarding a premise or property. The premise can be located in one of three ways: entering an address, tapping on the map or tapping on the location button. Phase 1 includes property information, open permits within the last three years (with a live link to the full permit website), neighborhood violations, 3-1-1 requests, zoning, land use, flood zone and other information for the selected premise. The next phase will include building violations, liens, property taxes and special taxing districts. The application is available on both the Apple and Google Play stores.

Miami-Dade 3-D Base layer

The planned continued enhancement of the GIS 3D buildings layer. The layer was incorporated by TPO into the SMART plan study enabling the vertical spatial analysis of land use and zoning along the corridors. It is being used by the Office of Resiliency for modeling climate change and sea level rise. 3D brings GIS data to a new level of accuracy and in the coming year will be used to vertically enable base layers such as Addresses, Streets, Zoning, and Land Use. The 3D layer is currently available in the centralized data repository for all county employees to consume.

Offender (Jail) Management System

Miami-Dade County Corrections and Rehabilitation (MDCR) Department operates the eighth largest jail system in the nation and includes seven detention facilities. Inmates housed in these facilities are awaiting trial or serving sentences of 364 days or less. MDCR currently utilizes legacy mainframe platform applications, as well as numerous vendor and County developed applications in different technologies to maintain their facilities and supervise their inmates. An effort is underway to implement a vendor package, Offender Management System (OMS) that will automate the intensive manual processes through MDCR and interface to existing vendor applications to record, verify, inspect and evaluate operational aspects of the facilities, including inmates. The OMS will also comply with regulatory and legislative mandates; the project is estimated to take approximately two years. The implementation will follow a phased approach. Phase 1 will include the deployment of the Classification, Housing, Incident, Discipline and Grievance modules. The scheduled implementation date for Phase 1 is first quarter of 2018. Phase 2 will automate other business processes within MDCR that will provide efficiencies with possible business process reengineering.

Criminal Justice Information System (CJIS) Modernization

The analysis phase of the Criminal Justice Information System (CJIS), the system of record for Miami-Dade County that tracks the life cycle of cases from arrest to disposition, is complete. The analysis included documenting the present state of over 14 functional areas; identifying high-level requirements for a new CJIS and reviewing over 3,000 documents for relevancy to identify requirements to comply with Supreme Court of Florida No. AOSC13-48, Electronic Filing of Criminal Cases in the Trial Courts of Florida via the Florida Courts e-Filing Portal. Findings, estimated costs and recommendations were
presented to the Criminal Justice Modernization Policy Committee representatives. The Statement of Work to be used as input to the Request for Proposal (RFP) was finalized.

**Electronic Offense Incident Report (eOIR)**
The electronic Offense Incident Report (eOIR) was automated; eliminating illegible reports and manual data entry into other law enforcement applications by crime analysts and other personnel. The eOIR may potentially include the following supplemental forms: Offense Incident (OI) Lead Sheet, Persons Report, Vehicle Report, Property Report, Illegal Document Report, Narrative Continuation Form, Officer Assaulted/Killed Supplement and Domestic Violence Supplemental Report. Electronic workflows have been incorporated to expedite the approval and completion of reports. Additional forms and workflows have been added to provide efficiencies to the Miami-Dade Police Department (MDPD).

**Computer Aided Dispatch (CAD)**
The Request for Proposal (RFP) for a multi-discipline Public Safety Computer Aided Dispatch (CAD) system was advertised and proposer responses are being evaluated. The goal is to procure a next-generation 911 (NG911) system to take advantage of capabilities such as text and video messaging to support both the Miami-Dade Fire Rescue (MDFR) and Police (MDPD) Departments. This will allow an extensive communication network to instantly be activated to properly route the call to all of the necessary agencies for dispatch.

**Laboratory Information Management System (LIMS)**
The implementation efforts of the Laboratory Information Management System (LIMS) to support Miami-Dade Police Department’s (MDPD) crime laboratory operations, including the management of property and evidence is in progress and expected to go-live during FY 2017-18.

**Law Enforcement Records Management System (LRMS)**
The analysis for a Records Management System (RMS) for Miami-Dade Police Department (MDPD) was completed which included the inventory of MDPD’s general functional areas from traffic citations to criminal registrations, investigative services and police services. The agency-wide requirements for the storage, retrieval and retention of information records, documents and files pertaining to law enforcement operations were documented. The requirements gathered covered the entire life span of records development from initial generation to its completion.

**eCitation**
The implementation of electronic traffic citations is scheduled to be implemented department-wide during first quarter of 2018. Efficiencies will be introduced by eliminating ineligible paper citations; thereby, increasing revenue for the involved agencies such as law enforcement and Clerk of Courts.

**Municipal Plans Review**
A pilot was completed to standardize the municipal plan review and permitting process in Miami Dade County. The project will enable time and cost savings to customers by reducing the time and cost, and minimizing the need to travel to County facilities to conduct plan review and permitting business
activity as well as allowing multiple review areas to review the plans concurrently. The goals of the project are to increase the efficiency of the plan review and permitting process by leveraging existing MDC computer applications/services by offering customers (developers, design professionals and citizens) a phased deployment plan. Deployment has been completed at the Cities of Miami Lakes, Miami Beach, and Cutler Bay; ITD is in the process of collaborating with North Miami Beach to expand the program further.

Enterprise Permitting

ITD will be executing the implementation plan for an enterprise land use management, licensing, permitting, plan review, inspections, and code enforcement solution. The solution will be used county-wide for land use management, licensing, permitting, plan review, inspections, and code enforcement business processes that will leverage the existing GIS infrastructure, provide mobile technology for remote work in the field, provide a workflow based user interface for administrative and support staff usage, and a citizen portal that will streamline these business processes for the public. The solution will expedite the business processes and facilitate data sharing and reporting.

Expansion of Virtualization Services

ITD will continue to augment its catalog of virtualization services by further developing the infrastructures that support desktop, server, and application virtualization with solutions that focus on delivering highly flexible and scalable environments that are accessible from any device and location. With fewer physical equipment and IT hardware, the expected results are reduced real estate, reduced maintenance costs, and reduced power and cooling requirements for better overall management.

Voice over IP Enterprise Telephony (Voice Gateway Expansion)

ITD implemented an enterprise telephony solution to address future needs of all County departments. The implementation of the Cisco IP telephony platform standardized administrative telephony requirements throughout the County by creating a telephony transport layer that rides the redundant County fiber optic infrastructure. The goal of the project is to consolidate all County voice service on the Cisco enterprise system. The expansion of the IP voice infrastructure allows the County to take advantage of the Voice over Internet Protocol (VoIP) technologies in the replacement of legacy phone systems as defined by the County’s strategic objectives. ITD will migrating Courts, and Miami Dade Transit in FY2017-18 and FY2018-19.

Enterprise Call Center and Interactive Voice Response (IVR) Consolidation

ITD implemented an enterprise telephony solution to address future needs of all County departments. The implementation of the Avaya Voice Portal platform standardized administrative telephony requirements throughout the County for Call Center and IVR services leveraging the County transport layer that rides the redundant County fiber optic infrastructure. The goal of the project is to consolidate all County call center and IVR applications under one (Avaya) enterprise solution. Present tenants on the system are 311 Answer Center, Elections, Animal Services, Transit, Finance, Public Housing and Community Development Departments, Property Appraiser’s Office, State Attorney’s Office, Water and Sewer Department, Public Defender Office, and the RER Miami-Dade Permitting and Inspection Center. ITD will continue migrating service by moving the County Courts in FY2017-18.
Enterprise Video Management & Analytics Consolidation

There are a diversity of video management systems (VMS) being used in the County without standardization that are installed for security surveillance, traffic surveillance, or other video related service. ITD will continue the enterprise initiative for a video management system which will serve as the foundation for the County going forward. This platform can be expanded in the future by adding needed additional servers, disk storage and user licenses to implement customer requests to support standardized video cameras, and recorders. To streamline, ITD will research ways to consolidate existing VMS with the accepted (Genetec) VMS and define a strategy to strive to consolidate all video resources into one solution that can be accessed from mobile devices over the network by public safety and other users granted access to specific video resources when a major incident or disaster occurs. With this solution, ITD can integrate video when new technology solutions are designed to improve the efficiency of customers' operations, as well as, the safety and security of County citizens.

Transportation Services

Additional electronic signage with predictive arrival technology to facilitate delivery of real time arrival/departures will be implemented at selected transit hubs to include implementation of infrastructure upgrades, mobile technologies that facilitates fare purchases, parking, transportation information and technology that improves County wide coordinated mobility. Partnering with other vendors to create an integrated mobile payment infrastructure and application allowing for regional integration and payment of multiple modes of transportation like Uber, Bikeshare and others.

The County currently operates approximately 2,800 traffic signal intersections with an incremental rate of approximately 30 intersections annually. These signals are managed at the County's Traffic Management Center (TMC) facility via a centralized software using wireless technology at intersection cabinets. In FY 2017-18 all traffic were signals migrated to using wireless technology with the implementation of 136 video cameras for real time traffic monitoring. During FY 18-19, ITD will work with Traffic Operations Engineers to implement a hybrid communications solutions and Intelligent Transportation System (ITS) devices will be integrated with the County's Automated Traffic Management Systems (ATMS) platform to support modern functions, like remote equipment malfunction diagnosis, video-based traffic flow surveillance, congestion management/mitigation, integrated multi-modal transportation network, and integrated operation of freeways and arterials. In addition, through integration with the County's ATMS, additional Transit vehicles and corridors will be equipped with Transit Signal Priority technology allowing for improved performance in bus services.

Solid Waste Management

FY17-18 and FY18-19 ITD will employ enterprise solutions and emerging technologies to support Solid Waste Management technology innovation and Implement Credit Card Chip (EMV) Readers at the 12 Scale Housse to facilitate secure payment processing, Implement new vehicle routing processes for Bulky Trash, Garbage pick-up, and Illegal dumping functions, Integrate the Garbage vehicles AVL/GPS with their GIS residential garbage routes, Implement a Mobile Application for Solid Waste, Implement a Citizen text/email message Service Request notification process for Waste Carts request/repair, Bulky Trash request, Illegal Dumping complaints, and Garbage complaints.
Cyber-security Services

ITD is responsible for maintaining the confidentiality and integrity of County and citizen data and ensuring the availability of systems and data to County departments and citizens they serve. This is accomplished through a continual process of implementing, reviewing and enhancing County cyber-security technologies, standards and procedures to mitigate risk to the greatest extent possible. ITD utilizes multiple technologies, including firewalls, anti-virus, automated security updates, intrusion detection and prevention, and security event and information monitoring, correlation and alerting, vulnerability assessment and penetration testing tools and has implemented technical and policy controls to ensure continued compliance with multiple security standards including Payment Card Industry (PCI), Criminal Justice Information Systems (CJIS) and Health Information Portability and Accountability Act (HIPPA). Ongoing enhancements address modernization of MDPD and Enterprise (MetroNet) security architecture, prevention, identification and notification of inadvertent and intentional disclosure of sensitive information, improving security for employees accessing County systems while away from the office or from mobile devices and implementation of encryption for County owned mobile devices.

Radio Systems Enhancement Initiatives

The objective of the radio systems enhancement initiatives are to increase radio communication capabilities within Miami-Dade County. The 800 MHz modernization project was completed which transitioned Miami-Dade County to new state of the art P25 digital networks servicing all County agencies, municipalities, state and federal agencies. The initiatives include evaluating communications coverage with a focus on improving the historically low coverage radio communication areas, expanding new radio infrastructure sites, and upgrading subscriber user hardware. New radio infrastructure sites have already been activated in the Key Biscayne and Cutler Bay areas. The Key Biscayne site has greatly improved communications for first responders in the village by expanding radio coverage on the island and surrounding waters. The Cutler Bay site has greatly enhanced communications in the South Dade area to include portions of the Everglades National Park.

The new radio infrastructure sites were activated in northeast and west Miami-Dade County. The northeast site, Industrial Communications, is a full transmit and receive site and is designed to improve radio coverage for all radio users in northeast Miami-Dade County. The west site, Trail Glades, was converted to a full transmit and receive site to enhance radio coverage in western and Hammocks region of the county. Both sites were prioritized to address areas of historically low radio coverage.

In FY2017-18 and beyond, the focus will be the addition of a new radio transmit and receive site within the Doral area as well as other improvements to areas of less than optimal radio coverage. The evaluation of the radio coverage expansion will continue with plans to make enhancement recommendations which may include the addition of other radio sites in order to support the approximately 30,000 radio devices in use today.

eBuilder Implementation

e-Builder is a cloud-based, project management information system that allows owners to manage and measure every step of the capital project lifecycle process – initiation, planning, design, procurement, construction, and closeout. At WASD, the e-Builder software will be used to manage the projects,
programs, and processes that are part of the capital plan. This includes all the projects managed internally and those under the major Capital Improvement Programs (CIP): Consent Decree, Ocean Outfall Legislation, and Pump Station Improvements. In addition, WASD will be managing the processes and transactions associated with utility developments that connect to our infrastructure and are donated to the department. These are referred to as donation projects. e-Builder will provide project managers the ability to see project information and will provide automated business workflows. Project managers will be able to determine what steps must take place to move any project forward. The project will be implemented in phases starting January 2018.

FUTURE OUTLOOK

Service Management Initiatives

As the County continues with IT consolidation, the importance of having a comprehensive, evolving and on-going plan is crucial. As ITD modernizes and implements new technologies, the Department has addressed the manner in which business is conducted and has begun restructuring and redesigning its customer service business strategy to improve service delivery management while working with customer departments and agencies to provide better services. As ITD expands its services countywide, the IT service center will become the central gateway for customers to strategically plan and order IT services. Embracing IT consolidation effectively within a complex organization such Miami-Dade County will challenge ITD for a more centralized and better managed IT environment that will support a more customer oriented service delivery strategy for the future. ITD will continue to establish value-added relationships and communications with its users/customers to improve its insight of business requirements, allowing for the establishment of standards to promote consistency, allocation and matching of costs to specific business units, and increasing awareness and visibility for IT service provisioning, as well as, maximizing existing and future investments by leveraging enterprise solutions.

Applications Initiatives

ITD will continue to work toward simplification of the County's applications portfolio by implementing enterprise and contemporary technologies and upgrading and augmenting skill sets to support current and future County applications. This will be accomplished through the growth of enterprise solutions, or through development or acquisition of new ones. This modernization effort will also require updating the skill sets of the IT professionals in emerging applications technologies while simultaneously ensuring adequate ongoing support for legacy systems until such time as these systems can be modernized. Reducing complexity in the applications portfolio, leveraging technology and expanding the availability of self-service components will enhance County staff and citizen access to data in a more timely and cost-effective manner. Specific areas of application modernization include:
• Continue Full County-wide roll-out of ERP, which will replace FAMIS, ADPICS, Time and Leave, Human Resource, and Payroll applications with an integrated solution that will streamline business processes, and automate electronic approval workflows throughout the County.

• Electronic payments, utilizing eCommerce platforms will be expanded, and updates will continue to support evolving PCI compliance requirements with special attention to the evolution of Crypto Currency and Block chain technologies.

• Implement Phase 2 of the Jail Management System (JMS) for the Miami-Dade County Corrections and Rehabilitation (MDCR) department to streamline processes through automation, reduce paperwork and increase safety throughout the facilities with available comprehensive information for decision making. Phase 2 includes the following functionality: incidents, inclusion of case and charge information, Rapid ID at onset of intake process to preliminarily identify inmates and inmate tracking.

• Enhancement of the County’s eCommerce capabilities with the addition of Interactive Voice Response (IVR) applications, using the enterprise Avaya infrastructure. The new service will improve and automate the County’s payment processes even further, as it will provide functionality to our residents and payers to submit payments via telephone, following voice prompts. The IVR applications will interface with the County’s Payment Gateway to complete the payment process, and will accept credit card and eCheck payments.

Infrastructure Initiatives

Continued expansion of Data Center Services: ITD has continued to expand its data center services to include additional capabilities that are consumed from cloud providers which have partnered with Miami-Dade County. These additional capabilities provide us with the ability to service non-County entities including municipalities, State and federal agencies operating within Miami-Dade County. Successful implementation of expanded cloud services should yield significant savings/cost avoidance benefits, and increase the County’s ability to leverage its investment in its cloud infrastructure to generate incremental revenue from external sources.

As new cyber-security technologies are implemented, existing technologies refreshed and migrated to a shared environment, ITD will continue to provide guidance to enable secure access to these resources. Working with departments, internal stakeholders, and the IT Leadership Council, ITD will continue to improve security through the implementation of technology, policy and standards to ensure the County’s risk exposure is minimized.